=> d 26,62,73,82,94,96,101

'L21' HAS NO ANSWERS
L7   6865 SEA FILE=USPAT WEB(5A)PRINT?
L9   3443 SEA FILE=USPAT (WEB(5A)EDIT?) OR (WEB(5A)FORMAT?)
L10   121 SEA FILE=USPAT L9(P)L7
L19   160 SEA FILE=USPAT 707/501/CCLS
L21   0 SEA FILE=USPAT L10 AND L19

=> d 110 26,62,73,82,94,96,101

26. 5,297,488, Mar. 29, 1994, Apparatus for selective random printing of
fixed data; Earnest B. Bunch, Jr., 101/182, 247 [IMAGE AVAILABLE]

62. 4,900,001, Feb. 13, 1990, Apparatus for printing on both sides of
continuous webs in a format producing collated stacks of ordered pages;
James M. Lapeyre, 270/1.01, 39.01; 493/320 [IMAGE AVAILABLE]

73. 4,726,532, Feb. 23, 1988, Web reeling method and apparatus; Sakari
Holm, 242/520, 147A, 542.3, 562, 908 [IMAGE AVAILABLE]

82. 4,590,859, May 27, 1986, Method of printing by sensing variable
indicia tag format length; Frederick M. Pou, et al., 101/484, 227;
271/259; 400/582 [IMAGE AVAILABLE]

94. 4,372,206, Feb. 8, 1983, Device for controlling the movement of a
web through a printing machine; Eric Tison, et al., 101/228; 226/143
[IMAGE AVAILABLE]

96. 4,307,662, Dec. 29, 1981, Apparatus for printing on webs; Mathias
Mitter, 101/123, 120, 126, 127.1 [IMAGE AVAILABLE]

101. 4,171,127, Oct. 16, 1979, Apparatus for collating pages of multi-up
printed documents; Richard E. Kish, et al., 270/58.27, 58.33; 271/234
[IMAGE AVAILABLE]

=> d hit 110 26,62,73,82,94,96,101

DETDESC:

DETD(1)

 Briefly, in accordance with my invention, I proved an improved apparatus
for **printing** images on a **web** comprised of a plurality of pages
attached end-to-end. The apparatus includes a control system for
receiving instructions defining at least first and second images each to
be printed on at least one of two successive pages in the **web** and for
generating **printing format** signals. The printing format signals
include information defining the first and second images and specifying
on which of the two pages each of the images is to be imprinted. A laser
printer is responsive to the printing format signals to print the first
image on at least one of the two successive pages. A mechanism is
provided for feeding the **web** into the laser **printer**. A plate ink
printing machine is on line with the laser printer and includes a frame,
a reservoir of ink mounted on the frame, an imprint roller with at least
one plate for imprinting the second image on the web, and a mechanism for

transporting ink from the reservoir to the plate on the imprint roller. The imprint roller is rotatably mounted on the frame means for displacement in at least one direction generally perpendicular to the longitudinal axis of the imprint roller. A roller activation mechanism is mounted on the frame of the plate printing machine and is responsive to the printing format signals to displace the imprint roller in said one direction at a selected time to press the plate against the web and imprint the second image on one of the two sequential pages. Apparatus is included for transporting the web so that the **web** simultaneously moves through the laser **printer** and the plate printing machine.

SUMMARY:

BSUM(15)

Computerized data retrieval from storage of coded data characters and the like by appropriate printer control circuits serves to formulate characters and organize them into page size batches distributed along the length of the **web** in a **format** that permits **printed** sheets to be separated and collated into stacks of sequentially ordered pages having information oriented in an upright position, and with the sequential page order counting both sides of the sheets in the stack. This permits binding stacks of pages at one boundary of the sheets.

DETDESC:

DETD(18)

With respect to the embodiment of FIGS. 2, 3 and 4, the printer feeders 56, 61 for the preferred single line type printer 15, 16 could simply be shift registers synchronized with non-stop web travel to actuate the line of printing elements with the desired data printing signals, which could be printed type or other character symbols or patterns as desired. With respect to the embodiment of FIGS. 7, 8 and 9, it is only necessary that the page be rotated 90.degree. prior to printing as indicated by "Page Rotation" circuitry 68. However, in the embodiment shown, 90.degree. counter-clockwise rotation is necessary for **printing** on the front of the **web,** and 90.degree. clockwise rotation is required for **printing** on the back of the **web.** A common way to **format** pages for printing is by a "bit map", that is the page is subdivided into small picture elements or "Pels" on the order of about 300 or more "Pels" per inch in both directions. For normal printing to produce a positive image, the "Pels" are read out in rows right to left. However, to rotate the page 90.degree. clockwise, it is necessary that the Pels be read out in columns from bottom to top and left to right. To rotate the page 90.degree. counter-clockwise the Pels are read out top to bottom and right to left. This page rotation will match the data to be printed with the required page sequencing and registration relationships. It should also be understood that the method of reading Pels from the bit map may necessarily be different depending on whether a "positive" or "negative" image is to be placed on the recording medium.

CLAIMS:

CLMS(1)

I claim:

1. An electronically controlled computerized printer system for printout on both sides of continuous webs to produce therefrom collated stacks of ordered pages, comprising in combination;
  two printing heads with corresponding interconnected data processing
   means for producing from stored data printed text on opposite sides of
   a **printable** medium;

a continuous **printable web** representing a series of similar
sized stacked sheets positioned together into said continuous web, said
web including the multiple fold line portions to delineate said series
of similar sheets, each multiple fold-line portion substantially
perpendicular to the opposite edges of said web;
means for feeding said web in a path past the two said printer heads so
as to **print** onto opposite sides of the **web** sheets;
means for storing data and feeding to each printing head a sequence of
page data batches to be printed in ordered format in registration on
both sides of the web on successive sheets along the web and arranged
in a sequence for presentation of successive pages in a sequentially
page numbered format counting both sides of the sheets when the sheets
are stacked in a fan-folded order; and
means for synchronizing and locating data to be printed on the
successive sheets of the **web** in said ordered **format** with the
presentation of the sheets of the **web** to the respective **printer**
heads, including means for presenting and printing data on both sides
of the **web** alternately **printing** pages right side up and upside
down on the same side of the **web**;
thereby to **print** out on the **web** for arrangement into a
fan-folded order in a stacked array of properly oriented sheets,
numbered consecutively on both sides of the sheets, and which can be
bound at one of the boundaries of the stacked sheets to form a booklet
with individual accessible sheets by separating said sheets at, at
least one of said multiple fold line portions.

CLAIMS:

CLMS(9)

9. A data processing system for printing from stored data onto pages
located on both sides of a continuous **web** and collating the
printed pages into a plurality of sequentially numbered pages
counting those on the front and back sides of the web, comprising in
combination;
 data processing means for organizing and storing data into a format for
  printing of a sequence of pages to be arranged in registry on the
  opposite sides of the web;
 a web containing a multiplicity of sheets connected together end-to-end
  along the web and separable at disconnect lines disposed between
  successive sheets and arranged perpendicular to opposite edges of the
  web;
 web feeding means for transporting said **web** to a **printing**
  station;
 printing means located at the printing station electronically
  coupled with the data processing means to reproduce in printed form the
  pages on opposite sides of the **web**, said **printing** means
  comprising a pair of printing heads located respectively on opposite
  sides of the **web** being transported and disposed for **printing** in
  registry pages located on opposite sides of said sheets as the **web**
  passes the **printing** heads; and
 means for formatting data to be presented to the respective printing
  means for printing the pages on each side of the web on sequential
  sheets of the **web**,
 whereby the **web** is **printed** into a **format** for the sheets to
  be transported by said transportation means to a delivery station and
  stacked in a fan-folded type sequence that can be fastened together in
  registry and having the pages presented in sequential order right side
  up when counting pages on both sides of the sheets in order,
 said web constituting a fan-fold array with folds arranged at said
  disconnect lines with the printed pages fan-folded into a stack,
  wherein the pages in said stack are fastened together along one edge of
  the stack coinciding with one of the web edges, and the top and bottom
  ends of the pages in the stack encompassing the folds are removed,
  thereby confining trimming to two edges.

CLAIMS:

CLMS(14)

14. The method of printing pages on both sides, of a continuous **web** with computer controlled electronic **printing** means and collating the pages into sequential order, comprising in combination the steps of:
feeding a continuous **web** of paper to be **printed** past a printing station;
printing at the printing station data on both sides of the web as it is fed past the printing station;
storing, organizing and presenting data to the printing station in page size batches sequence along the **web** and timed for **printing** pages in registration on the opposite sides of the **web**, with pages **formatted** sequentially along both sides of the web;
segregating, stacking and collating the pages presented along the length of the web in a fan-fold type stack with an ordered sequence of pages when counting both sides of the pages,
feeding a web having sheets defined sequentially along the web by means of fan-fold structure,
registering the printing of the pages with the sheets defined by the web, and thereby collating the pages by arranging the web in a fan-folded stack, and wherein said pages formatted sequentially along both sides of the web are alternatively right side up and up-side down, and further comprising the steps of,
fastening the stacked sheets together along one side of the web, and cutting off from the fan-folded stack the fan-fold structure holding the sheets together in a web at the top and bottom edges of the sheets.

CLAIMS:

CLMS(19)

19. The method of printing on both sides of a continuous **web** data in registry in a **format** of pages **printed** on opposite sides of the **web** into designated sheet locations for assembly into a stack of similarly oriented pages of numerically ordered sequence when counting pages on opposite sides of successive sheets;
comprising the steps of presenting and printing page size batches of data in registration on opposite sides of the web sheets on a sequence of sheets defined along the length of the web, in an order along the web that arranges the data into sequential pages counting the opposite sides of successive sheets in order when the sheets are stacked in a fan-folded manner, and alternately printing the data batches right side up and upside down on said sequence of sheets defined along the length of said web.

CLAIMS:

CLMS(20)

20. A printer system comprising in combination; means for transporting a continuous **web** of a **printable** medium through a printing station, a pair of electronically controllable **printing** heads for forming on the **web printed** character patterns in response to coded electronic signals from a computer system, said heads being located at the printing station on opposite sides of the path of the **web** to **print** on opposite sides of the **web**, computer controlled electronic data retrieval and processing means coupled to produce with the printing heads **printed** character patterns on the **web** responsive to data retrieved from said data retrieval means and further means responsive to said data processing means for formulation of electronic control signals to the **printing** heads and **web** transport means for **formatting** and **printing** said character patterns on both sides of the web in registry to form multi-paged sequences spaced along the length of the web comprising data of page

sized batches ready for separation from the web and collation into a
·stacked se●●nce ●●ordered pages having ch●●cter ●atterns thereon
oriented e●●to-e●

SUMMARY:

BSUM(4)

One type of web reeling apparatus to which the invention is applicable
is the so-called Pope-type reeling apparatus commonly used for reeling
paper web as the web leaves, for example, a paper making machine, a
coating machine, a supercalender or **printing** machine. The **web** is
reeled onto a shaft to form a roll which is pressed against the Pope or
reeling cylinder over a sector of which the web runs and which is
rotatably driven so that its circumfenterial speed corresponds to the
speed of the incoming web. Before the roll is completed, a new reeling
shaft is brought into nip contact with the Pope cylinder so that the new
reeling shaft begins to rotate at a corresponding circumferential speed.
As soon as the paper roll is completed, i.e., obtains the desired
diameter, it is shifted away from the Pope cylinder where upon its
rotational speed begins to decrease resulting in the **formation** of a
web loop between the new reeling shaft and the completed roll. The
web loop is guided, for example, by means of a jet of compressed air, to
wind around the new reeling shaft whereupon the web is torn from the
completed roll.

SUMMARY:

BSUM(6)

While prior art printers such as the one described in the aforementioned
U.S. Pat. No. 4,327,696 do provide a way to print characters of various
fonts and formats onto various size webs of sheet stock, such printers
can be augmented to incorporate additional features. The prior art
printers generally **print** the required information onto the **web** in
the desired **format** and then cut the **web** into tags of a
predetermined length containing one or more tag sections. For purposes of
discussion each section thus cut will be referred to as a tag regardless
of the number of tags actually printed on the section. The individual
tags printed on each tag will be referred to as tag sections. Moreover,
since the printer according to the invention is capable of **printing**
onto various types of **web** stock including, for example, stock that
can be cut into labels, cards or the like, the term tags is intended to
cover sections cut from various web stock, and is not limited to
merchandise tags.

SUMMARY:

BSUM(10)

In the prior art **printers** the wrong size **web** for a given
format can be loaded into the printer and result in the printing of
wrong size tags for a given **format**. When the **web** used is too wide
for the selected format, the result is that many tags may be wasted
before the error is detected. In the case where the web is too narrow for
the selected format, damage to the printing head or other machine
components can occur. Such damage can be costly both in terms of the
actual cost of repair to the machine, and in lost production while the
machine is down.

DETDESC:

The above●ncti is performed by the sys   whi   compares the length
and width requirements of the new format stored in the format storage 58
with the length and width requirements of the format of the previously
printed batch. If the values are not the same, the message with the
correct values is printed. A sensor senses the position of an out of
stock switch (not shown) or a printer carriage open switch 74 (FIG. 2) to
determine that the stock has been changed. The operator then enters data
defining the width of the stock just loaded into the system via the data
input 51. Alternatively, a width sensor (not shown) that automatically
senses the width of the web may be provided. The length information is
determined directly from the newly loaded web by sensing the distance
between web indices on the stock via the web index sensor 46. If the
width and length information thus loaded now concurs with the
requirements of the selected format, printing may proceed. If not, the
tag length and width required by the selected **format** is again
printed on the **web** and **printing** is terminated.

CLAIMS:

CLMS(1)

 What is claimed and desired to be secured by Letters Patent of the
United States is:

 1. A method for controlling the operation of a tag printer which is
adaptable to printing data according to a plurality of formats of the
type that makes imprints onto a web of sheet stock having indices
disposed thereon at predetermined intervals including the steps of
storing data representative of the data to be printed and the
corresponding length of the tag on which the information is to be printed
according to a predetermined **format,** sensing the indices as the
web is fed through the **printer** and terminating the operation if
the tag length defined by the indices does not substantially correspond
to the tag length defined by the stored data.

SUMMARY:

BSUM(1)

 The invention relates to a process for controlling the **format** to be
printed of a **web** which feeds, without tension, a **printing**
machine with a rotary printing cylinder, this machine operating in
successive cycles, each cycle being defined as one rotation of the
printing cylinder and involving the **printing** of one area of the
web in the said **format.**

CLAIMS:

CLMS(1)

 We claim:

 1. A printing machine comprising:
 a rotary printing cylinder having a **printing** speed for **printing**
  a **web,** with the possibility of changing the format, said machine
  operating in successive printing cycles and each cycle being defined as
  one rotation of the printing cylinder and involving the **printing** of
  one area of the **web** in the said **format;**
 a first endless traction device and another endless traction device both
  located downstream of the printing cylinder for engaging and conveying
  the web independently of one another after it has travelled past the
  printing cylinder, said first endless traction device conveying the web

forwards at a take-up speed which is at most equal to the printing
speed and comprising a freely rotating web-engaging sprocket device
having a stop and a rotor which is continuously driven at the take-up
speed, said rotor having a stop which drives the sprocket device by the
contact of its stop with the stop of the sprocket device whereby said
sprocket device is free to intermittently rotate at a higher speed than
the take-up speed but constrained to rotate at the take-up speed when
its stop contacts the rotor stop, and said another endless traction
device comprising a rotary member for intermittently conveying the
web at the **printing** speed, in synchronisation with printing
contact between said **printing** cylinder and the **web**; and
a device upstream of the **printing** cylinder for pulling the **web**
backwards in order to re-absorb, during each **printing** cycle, any
excess **web** length resulting from a difference between conveying at
the printing speed and conveying at the take-up speed.

US PAT NO: 4,307,662 [IMAGE AVAILABLE]   L10: 96 of 121

SUMMARY:

BSUM(16)

 A further important aspect of the invention resides in the construction
of the flat screen (stencil) itself. The stencil has two end portions
which are spaced from one another in the direction of movement of the
printing-medium container. At least one of these end portions (which is
relatively wide, as considered in this direction of movement) is made
impermeable to fluid, i.e. to gas and to the printing medium. When the
outlet opening of the printing-medium container moves onto this end
portion, no printing medium can escape from it. At the same time, the
influence of the suction force exerted by the suction box upon the
printing medium in the outlet opening is interrupted while the outlet
opening overlies this end portion. The undesired issuance of printing
medium while the outlet overlies the end portion is thus avoided, so that
no pool or pools of printing medium can form which would subsequently
cause uneven **printing** on the **web** and/or the **formation** of
stripes of schlieren in the pattern **printed** on the **web** (e.g.
sheets or bands of textiles such as carpets, rugs, fabrics, or of paper,
plastic or the like).

US PAT NO: 4,171,127 [IMAGE AVAILABLE]   L10: 101 of 121

DETDESC:

DETD(8)

 As shown in FIG. 5, the decks are also positionable so that their upper
surfaces define a single plane. Several suitable jack mechanisms 24 are
mounted between the apparatus base 19 and deck 18 to move the deck from
its elevated and retracted positions shown in FIGS. 4 and 5 respectively.
The deck 18 is placed in its retracted position when the apparatus is
used to collate one-up document pages, that is, when each document page
is defined by a single row **printed** on the continuous paper **web**.
Accordingly, the apparatus of the present invention has the versatility
to accommodate either one or multi-up document pages depending upon the
print format of the **web** fed thereto.

```
> s print?(5a)(web page)

        263035 PRINT?
        110398 WEB
        120189 PAGE
           330 WEB PAGE
                (WEB(W)PAGE)
L8           7 PRINT?(5A)(WEB PAGE)

=> d 18 1-7
```

1. 5,905,248, May 18, 1999, System and method for carrying out
information-related transactions using web documents embodying
transaction enabling applets automatically launched and executed in
response to reading URL-encoded symbols pointing thereto; Garrett
Russell, et al., 235/462.27 [IMAGE AVAILABLE]

2. 5,854,624, Dec. 29, 1998, Pocket-sized user interface for internet
browser terminals and the like; Gerry R. Grant, 345/169, 158, 172;
395/200.48 [IMAGE AVAILABLE]

3. 5,809,884, Sep. 22, 1998, Method and apparatus for controlling a
continuous web printing process; Roger C. Wise, 101/227; 400/74 [IMAGE
AVAILABLE]

4. .5,737,619, Apr. 7, 1998, World wide web browsing with content
delivery over an idle connection and interstitial content display; David
Hugh Judson, 707/500 [IMAGE AVAILABLE]

5. 5,692,073, Nov. 25, 1997, Formless forms and paper web using a
reference-based mark extraction technique; Todd A. Cass, 382/219;
358/468; 382/317 [IMAGE AVAILABLE]

6. 5,572,643, Nov. 5, 1996, Web browser with dynamic display of
information objects during linking; David H. Judson, 709/218; 379/88.13,
902; 707/513, 531 [IMAGE AVAILABLE]

7. 5,498,087, Mar. 12, 1996, Wide web compatible printer; Geoffrey A.
Wey, et al., 400/68; 395/117; 400/61, 63, 708 [IMAGE AVAILABLE]

```
=> d hit 18 1-7
```

US PAT NO: 5,905,248 [IMAGE AVAILABLE]   L8: 1 of 7

SUMMARY:

BSUM(11)

 A further object of the present invention is to provide such a system,
in which each Internet-enabled client computer system is provided with a
code symbol reader for reading URL-encoded symbols printed on transaction
cards, and other forms of **print** media, for automatically accessing a
Web page from an Internet information server that embodies an
Applet particularly designed for carrying out a particular type of
information-based transaction over the Internet.

US PAT NO: 5,854,624 [IMAGE AVAILABLE]   L8: 2 of 7

DETDESC:

DETD(21)
"Print"--may cause the **printing** of the **web page** being
viewed. It may be assigned to the secondary function, accessed by first
selecting the "shift" function.

US PAT NO: 5,809,884 [IMAGE AVAILABLE]   L8: 3 of 7

SUMMARY:

BSUM(6)

To efficiently use the webbing material, the computer database records
are typically printed on both sides of the web in a sequential manner.
For example, if a telephone bill for a particular customer constitutes
five pages, pages one, three and five will be printed on a first side of
the web, pages two and four will be printed on the opposite side of the
web. **Page** two will be **printed** on the opposite side of page
one and page four will be printed on the opposite side of page three.

US PAT NO: 5,737,619 [IMAGE AVAILABLE]   L8: 4 of 7

DETDESC:

DETD(13)

Although the invention has been described in terms of a preferred
embodiment, those skilled in the art will recognize that various
modifications of the invention can be practiced within the spirit and
scope of the appended claims. Thus, for example, the information supplied
to the user during the period between link activation and downloading of
the hypertext document need not be merely a visual output. It is also
envisioned that some or all parts of a particular message be conveyed to
the user aurally (via a multimedia speaker set, for example) as well as
on the display screen. The message itself may be retained on the screen
as an in-line image or other text along with the downloaded hypertext
document, and the browser includes appropriate means to queue the message
to print and/or to save the message or allow the user to compose a
response to the message. One such technique for responding to the message
uses the HTML "fill-in" form tags. The browser may be suitably programmed
to queue the mini **web page** for background **printing** whenever
the link is activated.

DETDESC:

DETD(17)

As noted above, the information object may be automatically or
selectively queued to the client printer upon display. This would enable
the viewer to generate merchandise coupons and the like related to the
web page being accessed. Thus the web site provider could offer the
viewer some added incentive for accessing its **web page** by causing
the **printing** of a redeemable coupon or other information token (e.g.,
a discount card, a receipt, etc.). All of these actions are initiated
during the otherwise downtime between web page access and download,
thereby significantly increasing the value of the on-line informational
content provided to the user.

US PAT NO: 5,692,073 [IMAGE AVAILABLE]   L8: 5 of 7

DRAWING DESC:

DRWD(13)

FIG. 20 is an example of a marked-up World Wide **Web page**

printout that can be used as input to Paper Web;

DETDESC:

DETD(74)

The question, then, is how to restore the lost link information to the **printed Web page**. This can be done by treating a **printed Web page** as a Formless Form. The result is Paper Web.

DETDESC:

DETD(75)

Paper Web is conceived as a new kind of Web browser. It, too, can render an HTML document and determine the positions of active elements in the rendered image. Paper Web creates and saves a map of the active elements, their positions in the rendered image, and their associated hypertext links. PaperWeb can then treat a **printout** of the rendered **Web page** as a Formless Form, by using its stored map to restore the hypertext links that would otherwise be lost.

DETDESC:

DETD(77)

FIG. 20 shows an example of a **printed Web page** 1000 which has been marked by the user and faxed back to computer 100 for processing by Paper Web. The user has marked a graphical button 1001 with an X mark 1002, indicating that the hypertext link represented by button 1001 is to be followed.

DETDESC:

DETD(84)

Thereafter, Paper Web enters a work loop in which the user marks up instances of hardcopy **Web page printouts** in his or her possession (step 2210) and sends these instances to the computer, which follows the indicated links and sends back new printouts. The computer continually updates a cache of the Web pages previously visited by the user, so that these pages can be recognized if marked instances of the pages are presented as input.

DETDESC:

DETD(93)

Finally, the map of active links is stored (step 2247) for later use during the mark interpretation step (that is, in step 2260 of FIG. 22). However, the map need not be stored with the cached page. Whereas in the embodiment of Formless Forms described earlier, the map of active links for each reference document was preferably precomputed (as shown in FIG. 9) and stored with the reference document, here, the map of active links can conveniently be computed at run time. That is because unlike legacy documents, which must be specially converted for use as active or hypertext documents, HTML documents are intended from the outset to be hypertext documents. So, once Paper Web has found the appropriate cached page corresponding to a given input page instance, Paper Web can readily regenerate the map of pixels to links from the HTML representation of the page. Paper Web, in effect, restores the hypertext functionality that otherwise is lost upon **printing** out the **Web page**.

DETDESC:

DETD(102)

(e.g., associating textual, graphical, photographic, or any other
elements of legacy documents with corresponding actions, thus allowing
even non-forms to behave like forms; associating elements of hardcopy
versions of Web or other hypertext documents with corresponding
hypertext links in the original HTML or other source documents, thus
allowing even a paper **printouts** of a **Web page** to provide
the user with ready access to any and all other linked Web pages).

DETDESC:

DETD(13)

 Although the invention has been described in terms of a preferred
embodiment, those skilled in the art will recognize that various
modifications of the invention can be practiced within the spirit and
scope of the appended claims. Thus, for example, the information supplied
to the user during the period between link activation and downloading of
the hypertext document need not be merely a visual output. It is also
envisioned that some or all parts of a particular message be conveyed to
the user aurally (via a multimedia speaker set, for example) as well as
on the display screen. The message itself may be retained on the screen
as an inline image or other text along with the downloaded hypertext
document, and the browser includes appropriate means to queue the message
to print and/or to save the message or allow the user to compose a
response to the message. One such technique for responding to the message
uses the HTML "fill-in" form tags. The browser may be suitably programmed
to queue the mini **web page** for background **printing** whenever
the link is activated.

DETDESC:

DETD(17)

 As noted above, the information object may be automatically or
selectively queued to the client printer upon display. This would enable
the viewer to generate merchandise coupons and the like related to the
web page being accessed. Thus the web site provider could offer the
viewer some added incentive for accessing its **web page** by causing
the **printing** of a redeemable coupon or other information token (e.g.,
a discount card, a receipt, etc.). All of these actions are initiated
during the otherwise downtime between web page access and download,
thereby significantly increasing the value of the on-line informational
content provided to the user.

SUMMARY:

BSUM(2)

 The field of this invention is within the printer art as it relates to
printing with impact printers, thermal printers, laser printers, or any
other type of printing or transfer means. It specifically relates to the
printing of a page in a sequential or columnar manner so that printing
data from a wide web printing program can be **printed** onto a narrow
web page. This is effected by sequencing the printer program to
print the first portion of the material of the wide web on a first
printed segment of a narrow web and the second and sequential portions of
the wide web page on a sequential columnar portion of the narrow web.
This fundamentally transposes the data material from the wide web format
so as to split it into serialized columns on the narrow web format.

SUMMARY:

The prior art with regard to computerized printing as often utilized a relatively wide web page that can exceed 13 inches. The wide **web page** has **printed** material going from the left side to the right that can be sequential or distinct portions although being on the same line. This data is formed digitally by discrete raster lines. Often times, the **printing** on the wide **web page** can be columnar **printed** subject matter spread across the page.

SUMMARY:

BSUM(5)

Such columnar material **printed** on a wide **web page** can be such wherein there are multiple columns of material going from the left to the right. The columns of material can be printed in a format that allows for like material or differentiated columns going from the left to right across the page. The columns of material can then be sequenced again in the next series of columns spaced downwardly on the page.

SUMMARY:

BSUM(9)

In order to print the wide web data material, a narrow web printer page width and length are selected. This defines the narrow **web page** image. During the **printing,** the wide web or virtual image is then parsed or segregated into a narrow web width into columns or serialized sequential rows. In this manner, each wide **web page** is **printed** sequentially on a narrow web printer.

SUMMARY:

BSUM(14)

Initially, the user supplies a data for a wide **web page** image thereafter for **printing** on a narrow web width. The wide web width is the virtual or logical width that the user or the program operates under. This is the width of the image given.

```
=> s web format?

        110398 WEB
        603423 FORMAT?
L3         908 WEB FORMAT?
               (WEB(W)FORMAT?)

=> s l1 and l3

L4           3 L1 AND L3

=> d l4 1-3
```

ᵛ 1. 5,498,087, Mar. 12, 1996, Wide web compatible printer; Geoffrey A.
Wey, et al., 400/68; 395/117; 400/61, 63, 708 [IMAGE AVAILABLE]

2. 4,640,742, Feb. 3, 1987, Method and apparatus for controlling the
size of an opening through which a product is metered; Donald E. Helleur,
162/212, 259, 347; 264/40.7; 425/141, 144 [IMAGE AVAILABLE]

3. 3,772,107, Nov. 13, 1973, METHOD AND APPARATUS FOR FORMING A NONWOVEN
FIBROUS WEB; Anthony R. Gentile, et al., 156/62.8; 19/161.1, 302, 305;
156/229, 291, 305, 324, 381, 497, 543, 578; 425/115 [IMAGE AVAILABLE]

```
=> d hit 1-3
```

US PAT NO: 5,498,087 [IMAGE AVAILABLE]   L4: 1 of 3

SUMMARY:

BSUM(2)

  The field of this invention is within the printer art as it relates to
printing with impact printers, thermal printers, laser printers, or any
other type of printing or transfer means. It specifically relates to the
printing of a page in a sequential or columnar manner so that printing
data from a wide **web printing** program can be printed onto a
narrow web page. This is effected by sequencing the printer program to
print the first portion of the material of the wide web on a first
printed segment of a narrow web and the second and sequential portions of
the wide web page on a sequential columnar portion of the narrow web.
This fundamentally transposes the data material from the wide **web
format** so as to split it into serialized columns on the narrow
web format.

SUMMARY:

BSUM(7)

  This invention allows label application programs having data developed
for wide **web printers** to be printed on a narrow **web
printer** without a modification of the application program. For
instance, the implementation of the invention can be such wherein label
printing of multiple labels across a 13.2 inch wide **web printer**
can be staggered by sequentially printing them on a narrow **web
printer** in columnar form. This is effected by the use of the same
application program without a modification. Thus, a dramatic improvement
is provided by this invention with respect to the programming and

- software to create greater use of the existing application program for wide web data not rely for a discrete wide web printer.

SUMMARY:

BSUM(8)

The solution by the invention lies in its apparatus and method being able to take wide **web printing** data from a host which is received with an image developed in a page memory. This wide web page image or virtual image is then modified by the invention hereof for printing on a narrow **web printer**.

SUMMARY:

BSUM(9)

In order to print the wide web data material, a narrow **web printer** page width and length are selected. This defines the narrow web page image. During the printing, the wide web or virtual image is then parsed or segregated into a narrow web width into columns or serialized sequential rows. In this manner, each wide web page is printed sequentially on a narrow **web printer**.

SUMMARY:

BSUM(10)

A result is the target page length of the printed data material has been formed to provide wide web material parsed sequentially onto a narrow web. The ensuing net result with regard to labels is to allow them to be cut individually or in sets on a narrow web or unit substrate. This results in the printing of labels and bar code label application programs on a narrow **web printer** without modification.

SUMMARY:

BSUM(13)

In summation, the wide web compatible printing apparatus, method and system of this invention modifies the normal printing algorithm or virtual page of a wide **web printer**. The bitmap that is for the wide printed page will fit on a narrow web. The net result is to allow the user to create a "virtual" image that is larger than the physical paper and then break it up into pieces or serialized columns from the wide web width to be printed sequentially on the narrow web width.

SUMMARY:

BSUM(15)

The virtual or logical width is then narrowed to a columnar form of the width that the user wishes to print in a narrow **web format**. It can be the width of a single segment of the data (i.e. a single label) or some multiple of the width of each label.

DETDESC:

DETD(3)

The paper 12 is of a narrow web width and can be printed upon through the thermal printing process. Suffice it to say, other types of narrow **web printers** such as impact printers, laser printers, thermal transfer, or other type printers can be used with the system, process, and invention hereof.

DETDESC:

DETD(13)

The foregoing control functions are interconnected with a circuit board
which can be in part controlled by a disk placed within slot 52. Thus the
control functions in conjunction with a disk in part incorporating the
invention hereof permits data from a host with a wide web configuration
to be entered into the printer for narrow **web printing**.

DETDESC:

DETD(25)

This bitmap is then provided to a bit mapped image memory 96. The
bitmapped memory data is then sent to the raster output generator 87 that
re-characterizes the wide web bitmap to the narrow web data for a raster
output 98. In effect the raster output is foreshortened to be the length
of only label or page 71, until label 71 is entirely printed, afterwhich
it skips label 71 to entirely print label 73. This provides narrow
web printing through the printer function 100 that is inherent
within the printer 10 or any other suitable printer using the process and
apparatus of this invention.

DETDESC:

DETD(27)

For purposes of understanding the nature of the processing flow, it can
be seen in FIG. 2 that a data input stream from a host such as a
parallel, serial, or IBM coax or twinax is provided in the form of the
input data stream from the computer 102. This data is received at the
host input/output process 104 which is connected to an emulation process
94 which creates the bitmap from the graphics library and font library.
In the meantime, a messaging system and real time operating system is
connected respectively to the emulation process and the print engine
driver 108. Print engine driver 108 has code (or a process) that is
generally referred to as process 90 within the print engine driver, this
creates the wide web to narrow **web printing** configuration. It
fundamentally creates a printed output in the form of narrow **web
printing** 100 through the control of each raster line as to length and
number.

DETDESC:

DETD(32)

By way of example, the wide **web printing** function normally uses
the wide web bitmap. The raster lines extend through the whole page to be
printed such as pages 70 and 72 to print both labels 71, 73 and 75 and 77
respectively on the pages. These pages incorporate raster lines sweeping
across the pages to form lesser pages or individual labels 71, 73, 75,
and 77.

DETDESC:

DETD(42)

The conversion of the wide **web print** shown in FIG. 5 resulting
in Pages 70 and 72 and discrete labels or lesser pages 71, 73, 75, and 77
of FIG. 6 is provided by modifying the printing algorithm. The wide web
function implies that the entire image shown in the bitmap to print the
pages of FIG. 5 (i.e. pages 70 and 72) will fit on the paper.

CLAIMS:

5. The pr●er a laimed in claim 4 in co nati●with a host which
provides wide **web printing** data further comprising:
 means for emulating said wide **web printing** data to provide a
  bitmapped image; and,
 means for inputing said bitmapped image to said raster output generator
  for allowing said bitmapped image to be printed on respective raster
  lines of the narrow web width.

CLAIMS:

CLMS(9)

9. A printer having a print engine driver in combination with a host
which has printing data constituting an output greater in width than the
width of the record medium incorporating said print engine driver further
comprising:
 means to determine the width of said record medium;
 means to input data constituting wide web width printing data;
 means for calculating the difference between the wide web width and the
  narrow web width of said printer, forming a memory skip distance;
 means for providing narrow web data of a width constituting the column
  width of the narrow **web printer;**
 means for adding the memory skip distance to the pointer on the raster
  of the print engine driver to cause it to skip the wide web data beyond
  the column being printed;
 means for printing the next raster line after said skipped data; and,
 means for repeating every raster line of said wide web data sequentially
  until the entire column of the narrow web formulated data has been
  printed.

CLAIMS:

CLMS(15)

15. The printer as claimed in claim 14 in combination with a host
providing said wide web data that is then emulated into a bitmapped image
memory, and means for inputing said bitmapped image memory to said raster
output generator for establishing the width of said narrow **web
printing.**

CLAIMS:

CLMS(16)

16. A process for printing wide **web print** data on a narrow web
width comprising:
 providing a printer having means for printing on a narrower web width
  than the wide web data;
 establishing said narrow web width of the media of said printer to be
  printed upon;
 providing and inputing the wide web width as established from the data
  of said wide web width;
 calculating the difference between said wide web width and narrow web
  width data;
 establishing a memory skip distance based upon the difference between
  said narrow web width and said wide web width data; and,
 inputing said memory skip distance to a raster output generator for
  providing a raster output line of the width of said narrow **web
  printing** to be printed by said printer. .

CLAIMS:

CLMS(18)

18. The process as claimed in claim 17 further comprising:
inputing said narrow web width for purposes of providing a left margin
  adjust to narrow web width to be printed
inputing said left margin adjust to said raster output generator; and,
printing said narrow **web print** data by said raster output
  generator printing data based upon the left margin adjust.

DETDESC:

DETD(16)

In the case of paper making and other similar processes two common
properties that the orifice are capable of controlling are caliper and
basis weight along with **web formation,** opacity, show-through, and
other properties related to uniformity of web structure. Device for
sensing these properties are available and could be tied in to a closed
loop to control the orifice and through it the desired property of the
final web.

DETDESC:

DETD(37)

Similarly, blade coaters could utilize induction coils to control the
gap between the tip of the blade and the **web. Print** roll coaters
could be handled in a manner similar to the above-mentioned roll coaters
while in the case of trailing blade coaters, separate expansion elements
may be added so that the gap between the blade tip and the web could be
controlled. Thus, the gap would be controlled by extending or retracting
the tip of the blade or by varying the angle between the blade and the
roll in a manner similar to that shown in FIG. 7.

SUMMARY:

BSUM(6)

The above-described method of **web formation** produces a nonwoven
web in which the major proportion of fibers are highly oriented, or
parallelized in the machine-direction. Such a web has an exceptionally
high machine-direction tensile strength, but is normally quite weak in
the cross-machine-direction. These nonwoven webs tend to tear when
subjected to cross-direction stresses during the use of products
incorporating such webs in their construction.

SUMMARY:

BSUM(9)

Prior art apparatus for forming nonwoven fibrous webs from multiple laps
of loosely associated staple fibers, the major proportion of which are
oriented, or parallelized in the machine-direction, have employed
slatted, or air pervious conveyors upon which the laps are directed into
overlying relationship with each other. These air pervious conveyors have
been maintained open to permit the dissipation of air currents created by
the high speed rotation of elements of conventional web forming machines,
such as the high speed rotation of a card roll in a conventional card
machine. In these prior art apparatus, turbulent air currents have been
created at web forming speeds exceeding 100 feet per minute. These
turbulent air currents roll along the loosely associated fibers in the
overlying laps and tend to disassociate the fibers within the laps from
each other to destroy the integrity of these laps and thereby prevent the
formation of an acceptable nonwoven fibrous web. The use of an

air-impervious conveyor in prior art apparatus is somewhat effective in minimizing air turbulence through the laps of staple fibers; however, the air impervious conveyor interacts with the fibers of the laps to create static charges on the fibers of the laps at high web forming speeds to prevent uniform **web formation**. Therefore, the prior art apparatus are speed-limited by the creation of turbulent air flow and/or static charges.

CLAIMS:

CLMS(5)

5. The method according to claim 1, including wet pressing said laps together to form said unitary nonwoven fibrous **web, print** bonding together fibers of said unitary nonwoven fibrous web and drying said nonwoven

CLAIMS:

CLMS(11)

11. The method according to claim 8, including wet pressing said adjacent overlying laps together to form said unitary nonwoven fibrous **web, print** bonding together fibers of said unitary nonwoven fibrous web and drying

CLAIMS:

CLMS(21)

21. The method according to claim 18, including wet pressing said adjacent overlying laps together to form said unitary nonwoven fibrous **web, print** bonding together said fibers of said unitary nonwoven fibrous web and